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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/597,192	06/20/2000	William P. Bunton	1662-28800 (P00-2998)	6005

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EXAMINER

TSE, YOUNG TOI

ART UNIT	PAPER NUMBER
2637	11

DATE MAILED: 08/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/597,192

Applicant(s)

BUNTON ET AL.

Examiner

YOUNG T. TSE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 13-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claim 1-2, 8-11, 13 and 17-19 have been considered but are moot in view of the new ground(s) of rejection.

Drawings

2. The drawings were received on 01 June 2004. These drawings are acceptable.

Specification

3. The disclosure is objected to because of the following informalities: on page 3, line 9, the phrase "an island unto itself" is not understood; on page 17, line 5, "01000" should be "0100". Appropriate correction is required.

Claim Objections

4. Claims 4, 8, 10, 14-16 and 19 are objected to because of the following informalities: in claim 4 (line 1) and claim 15 (line 2), "a positive" should be "the positive" for clarity; in claim 8 (lines 1-2), "an 10B/8B" should be "a 10B/8B"; in claim 10 (line 2), the phrase "the sequences of received symbols" appears to read "the sequences of the first and second received symbols" to clarify the difference of the sequences of the received symbols since claim 1 recites "a first sequence of received symbols" and claim 9 recites "a second sequence received symbols", also see claim 19;

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in claim 14 (line 1), the word "and" should be deleted; wherein claim 16 depends upon claim 15; and in claim 19 (line 3 and line 4), "is" and "signals" should be "are" and "symbols" respectively. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1-11 and 13-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

According to the present invention of an adapter circuit 800 as shown in Figure 8, the configuration of claims 1-11 and 13-19 does not correspond to the disclosure of Figure 8 and the claimed subject matter recited in claims 1, 9, 11 and 18 is not described in the specification in order to enable one skill in the art to which it pertains.

Claims 1-11 and 13-19 are directly related to a receiver section of the adapter circuit of Figure 8, wherein the adapter circuit comprises the receiver section (830, 870 and 880) and a transmission section (890, 860 and 840).

In Figure 8, the receiver section comprises four channels for converting differential signals to a sync/reconstruction/multiplexer logic circuit 880 through the four

channels. Wherein each channel comprises a lane receiver 830, a decoder 850 and a FIFO memory 870, the sync/reconstruction/multiplexer logic circuit 880 multiplexes the outputs of the four individual byte streams to reconstruct a single byte stream to a device 815 through a local interface 805.

Claim 1 recites the adapter circuit 800 comprises a lane receiver 830, a decoder 850 and a circuit configured to determine if the sequence of received symbols is incorrect due to inversion of the differential signal, wherein the lane receiver is configured to correct for inversion of the differential signal if the circuit determines inversion exists.

It is unclear which element(s) in Figure 8 is considered as the circuit for operating the functions mentioned in claim 1. Further, the specification fails to explain how to make/use or operate the sequence of the received symbols is correct/incorrect due to inversion of the differential signal by the lane receiver 830 and/or the sync/reconstruction/multiplexer logic circuit 880. Also see claim method claim 11.

For the same reasons described in claim 1, claim 9 recites a different channel of the lane receiver 830 and the decoder 850 and the same circuit to determine if the second sequence of received symbols is incorrect due to inversion of the differential signal, wherein the lane receiver is configured to correct for inversion of the differential signal if the circuit determines inversion exists. Also see method claim 18.

Claim 17 recites the running disparity code is an 8B/10B code, however, claim 17 depends upon claim 13 which depends upon claim 11 wherein the running parity code is used by a 10B/8B decoder in the receiver section. The 8B/10B code is used in the

encoder in the transmission section. See page 5, line 19 to page 6, line 13 of the specification.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1-2, 8, 11, 13 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blumenthal et al. in view of Mccallister et al. (Both are newly cited).

Blumenthal et al. (US Patent No. 5,257,287) discloses a differential receiver 10 in Figure 1 for polarity detection and automatic reversal of an incorrect polarity.

With respect to claims 1 and 11, the differential receiver 10 comprises a polarity correction circuit 12 remedies an incorrect polarity of differential signals RD+ and RD- in

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response to a fix polarity signal generated from a data polarity detection circuit 14 (column 5, lines 8-13). The correction circuit 12 could invert input signals upon an assertion of the fix polarity signal to correct the incorrect polarity (column 5, lines 21-24). Although Blumenthal does not explicitly show or suggest which elements of the differential receiver 10 are part of a decoder as recited in claims 1 and 11, Blumenthal teaches the differential receiver receives both link-pulses and Manchester-encoded data (see column 2, lines 55-57). In other words, at least part of the differential receiver includes a decoding circuit for converting the Manchester-encoded data into Manchester decoded data by the differential receiver.

Mccallister et al. (US Patent No. 5,995,551) discloses a communication system 10 in Figure 1 comprising a transmission section (14, 16, 18 and 22) and a differential receiver section (32, 34, 36 and 38). In the differential receiver section, a rotationally invariant PTCM decoder 34 is disclosed for differential decoding the PTCM encoded data transmitted from a rotationally invariant PTCM encoder 18 in order to regenerate an original signal of the transmitted signal.

Therefore, it would have been obvious to one of ordinary skill in the art that at least part of the elements of Blumenthal's differential receiver are operated as a decoder circuit as taught by Mccallister in order to decode the encoded signal generated by an encoder of a transmitter circuit to correct or decode the encoded signal prior the regeneration of the original transmitted signal.

With respect to claims 2, 8, 11 and 13, the decoded code symbols are decoded from a running disparity code having positive and negative running disparity symbol and

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the decoded code is a 10B/8B code are well known in the art as described in the description of related art on page 6, lines 1-13 of the instant specification.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Young Tse** whose telephone number is **(703) 305-4736**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Jay Patel**, can be reached at **(703) 308-7728**.

Any response to this action should be mailed to:

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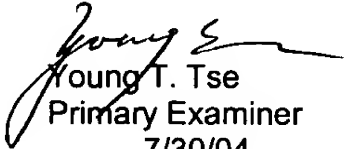
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or faxed to:

(703) 872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.


Young T. Tse
Primary Examiner
7/30/04